17/3,AB/20 (Item 20 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

07690205 94065201

C33 antigen and M38 antigen recognized by monoclonal antibodies inhibitory to syncytium formation by human T cell leukemia virus type 1 are both members of the transmembrane **4 superfamily and associate with each other and with CD4 or CD8 in T cells.**

Imai T; Yoshie O
Shionogi Institute for Medical Science, Osaka, Japan.

J Immunol (UNITED STATES) Dec 1 1993, 151 (11) p6470-81, ISSN 0022-1767 Journal Code: IFB
Languages: ENGLISH
Document type: JOURNAL ARTICLE

C33 Ag and M38 Ag had been identified by mAb inhibitory to HTLV-1-induced syncytium formation. The cDNA encoding C33 Ag had revealed that it belongs to the newly defined **transmembrane** 4 superfamily (TM4SF). M38 Ag was detected on virtually all human cell lines and fresh leukocytes except for most granulocytes. It was also expressed on a mouse hybrid cell clone containing human chromosome 11q23-pter. Immunoprecipitation and immunoblot analyses identified a monomeric 26-kDa protein. The M38 epitope was dependent on S-S bonding. These characteristics were very similar to those reported for **TAPA -1** (the target of antiproliferative antibody-1), which also belongs to TM4SF as C33 Ag. We therefore cloned the cDNA of human **TAPA -1** and expressed it in COS cells. M38 indeed reacted with COS cells expressing human **TAPA - 1** . We concluded that M38 Ag was identical to **TAPA -1** . To further investigate the biologic functions of C33 Ag and M38 Ag (**TAPA - 1**) and their roles in HTLV-1-induced syncytium formation, molecules associated with these Ag were examined in T cells. Immunoprecipitation from surface-iodinated cell lysates revealed that proteins co-precipitated by C33 and M38 were mostly common including each other. Sequential immunoprecipitation-immunoblot experiments confirmed that C33 Ag and M38 Ag (**TAPA - 1**) were associated with each other. The association was further confirmed in BHK cells doubly transfected with human cDNA for C33 Ag and **TAPA -1** . We extended similar analyses and found that C33 Ag and M38 Ag (**TAPA -1**) were regularly associated with CD4 or CD8. The association of these Ag on the cell surface was further supported by co-modulation of M38 Ag (**TAPA -1**), CD4 and CD8 with C33 Ag. This is the first time that a physical association between the members of TM4SF is demonstrated. Furthermore, the regular association of C33 Ag and M38 Ag (**TAPA -1**) with CD4 or CD8 might indicate that they play a role in expression and/or function of the CD4/CD8 co-receptor complex.

17/3,AB/21 (Item 21 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

07654391 94014351

The TAPA - 1 molecule is associated on the surface of B cells with HLA-DR molecules.

Schick MR; Levy S
Department of Medicine, Stanford University Medical Center, CA 94305-5306.

J Immunol (UNITED STATES) Oct 15 1993, 151 (8) p4090-7, ISSN 0022-1767 Journal Code: IFB
Contract/Grant No.: CA34233, CA, NCI
Languages: ENGLISH
Document type: JOURNAL ARTICLE

TAPA - 1 is a **transmembrane** protein that has been shown to be involved in cell growth and cellular adhesion. Our studies were aimed at determining the mechanisms of the biologic phenomena mediated by **TAPA -1**, which include the identification of proteins that are associated with it on the surface of lymphocytes. We and others have previously shown that Leu-13, a leukocyte Ag, is one such molecule and that in B cells **TAPA -1** is associated with the CD19 Ag. Herein we identify an additional molecule, HLA-DR, that is noncovalently associated on the surface of B cells with **TAPA -1**. This association was first detected by immunoprecipitation by anti-**TAPA - 1** and by anti-HLA-DR antibodies in the presence of mild detergents. The initial observation was confirmed by 2-dimensional SDS-PAGE and by direct identification of **TAPA - 1** in anti-HLA-DR immunoprecipitates by Western blot analysis. The association of the two molecules on the surface of a human B cell line was shown by cocapping experiments. In addition, antibodies to both molecules can induce cellular adhesion and an antiproliferative effect. Because the tissue distribution of these two molecules only partially overlaps, with **TAPA -1** being expressed on most cell types and MHC class II expressed on a more restricted group of tissue, it is possible that the **TAPA -1** molecule provides a basic function that can augment a cell type specific activity. In B cells the association of **TAPA -1** with CD19 and HLA-DR may increase cellular interaction and play a supporting role in the transmission of specific signals.

17/3,AB/24 (Item 24 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

07386561 90318365

TAPA - 1, **the target of an antiproliferative antibody, defines a new family of** transmembrane **proteins.**

Oren R; Takahashi S; Doss C; Levy R; Levy S
Stanford University School of Medicine, California 94305.

Mol Cell Biol (UNITED STATES) Aug 1990, 10 (8) p4007-15, ISSN 0270-7306 Journal Code: NGY
Contract/Grant No.: CA34233, CA, NCI; CA33399, CA, NCI
Languages: ENGLISH
Document type: JOURNAL ARTICLE

A murine monoclonal antibody was identified by its ability to induce a reversible antiproliferative effect on a human lymphoma cell line. Immunoprecipitation studies revealed that the antibody reacted with a 26-kilodalton cell surface protein (**TAPA -1**). A diverse group of human cell lines, including hematolymphoid, neuroectodermal, and mesenchymal cells, expressed the **TAPA -1** protein. Many of the lymphoid cell lines, in particular those derived from large cell lymphomas, were susceptible to the antiproliferative effects of the antibody. **TAPA -1** may therefore play an important role in the regulation of lymphoma cell growth. A cDNA clone coding for **TAPA -1** was isolated by using the monoclonal antibody to screen an expression library in COS cells. Analysis of the deduced amino acid sequence indicated that the protein is highly hydrophobic and that it contains four putative **transmembrane** domains and a potential N-myristoylation site. **TAPA - 1** showed strong homology with the CD37 leukocyte antigen and with the ME491 melanoma-associated antigen, both of which have been implicated in the regulation of cell growth.

09/011,910

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     (FILE 'USPAT' ENTERED AT 12:32:16 ON 01 SEP 1999)
L1           394 S HEPATITIS(W)C(W)VIRUS
L2            13 S 24KD
L3           163 S 24(W)KD
L4           174 S L2 OR L3
L5             0 S L1 AND L4
L6         36476 S ANTIBOD###
L7           325 S L1 AND L6
L8        186389 S MOLECULAR(W)WEIGHT
L9         10326 S KD
L10         2330 S KILODALTON#
L11        39665 S MW
L12       209491 S L8 OR L9 OR L10 OR L11
L13          160 S L7 AND L12
                 SET HIGH OFF
L14          160 S L13
                 SET HIGH ON
L15          160 S L14 AND L12
L16        36482 S ANTIBOD?
L17            0 S L1(P)L16(P)KD
L18          125 S L1(P)L16
L19           52 S L18 AND L12
                 SET HIGH OFF
L20           52 S L19
                 SET HIGH ON
L21           15 S L20 AND KD
L22         4585 S TRANSMEMBRANE
L23           42 S L1 AND L22
                 SET HIGH OFF
L24           42 S L23
                 SET HIGH ON
L25           42 S L24 AND L22
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09/011,910

Set	Items	Description
S1	26	CD(W)81
S2	348	CD81
S3	0	HCD(W)81
S4	2	HCD81
S5	343	TAPA(2N)1
S6	607	S1 OR S2 OR S4 OR S5
S7	109	24KD
S8	0	?GLYCOSOLATED
S9	133714	TRANSMEMBRANE
S10	10691	AMMONIUM(W)(SULPHATE OR SULFATE)(W)PRECIPITATION
S11	6654	HYDROPHOBIC(W)INTERACTION(W)CHROMATOGRAPHY
S12	10038	ACETONE(S)PRECIPITAT?
S13	22	GLYCOSOLATE? ? OR UNGLYCOSOLATE? ? OR NONGLYCOSOLATE? ?
S14	0	S6 AND S7
S15	225	S6 AND S9
S16	88	RD (unique items)
S17	52	S16 NOT PY>1996
S18	0	S17 AND S13
S19	1964636	ANTIBODY OR ANTIBODIES
S20	52	S7 AND S19
S21	54190	HEPATITIS(W)C(W)VIRUS?
S22	42346	HCV
S23	63956	S21 OR S22
S24	0	S20 AND S23
S25	22990	S19 AND S23
S26	2	S25 AND 2?KD
S27	2	S26
S28	2	S27 AND 2?KD
S29	88	S7 NOT PY>1995
S30	93	S7 NOT PY>1996
S31	78	RD (unique items)
S32	84	S9 AND S10
S33	4	S32 AND S12
S34	2	S32 AND S11
S35	0	S33 AND S34
S36	6	S33 OR S34
S37	5	S36 NOT PY>1996
S38	5	RD (unique items)
S39	11	S10 AND S11 AND S12
S40	10	S39 NOT PY>1996
S41	6	RD (unique items)

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